

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001883

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7: A61K 38/28, A61K 31/198, A61K31/64, A61K38/16, A61K31/4439, A61P 3/10

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC 7: A61K 38/28, A61K 31/198, A61K31/64, A61K38/16, A61K31/4439, A61P 3/10Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)
Canadian Patent Database, Delphion, Pubmed; Keywords: hydroxylated amino acid, hydroxyisoleucine, insulin, biguanide, sulfonylurea, GLP-1 receptor agonist, diabetes, glucagon

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1206257 INNODIA, (Ribes G. et al.) 22 May 2002	1-4, 13-18, and 27
Y	examples 1-9 and figures 1-9	5-12, 19-26 and 28
Y	SAUVAIRE Y. et al., "4-Hydroxyisoleucine: A Novel Amino Acid Potentiator of Insulin Secretion", February 1998 DIABETES, vol. 47, pages 206-210 whole document	1-28
Y	BROCA C. et al. " 4-Hydroxyisoleucine: Effects of Synthetic and Natural Analogues on Insulin Secretion", March 2000, EUROPEAN JOURNAL of PHARMACOLOGY, vol. 390, pages 339-345 whole document	1-28

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex.

* Special categories of cited documents :
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international-type search
14 January 2005 (14-01-2005)

Date of mailing of the international-type search report

02 MAR 2005

Name and mailing address of the ISA/
 Commissioner of Patents
 Canadian Patent Office - PCT
 Ottawa/Gatineau K1A 0G9
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	BROCA C. et al. "4-Hydroxyisoleucine: Experimental Evidence of its Insulinotropic and Antidiabetic Properties", October 1999, AMERICAN JOURNAL of PHYSIOLOGY, vol. 277(4 Pt 1) pages E617-E623 whole document	1-28
Y	US5470879 LABORATORIES MONAL, (Sauvaire Y. et al.) 28 November 1995 whole document	1-28
Y	US 5545618 Buckley DI. et al. 13 August 1996 whole document	11, 12, 25 and 26
P, X	BROCA C. et al. "Insulinotropic Agent ID1101 (4-Hydroxyisoleucine) Activates Insulin Signalling in Rat", September 2004,	1-4, 13-18, and 27
P, Y	AMERICAN JOURNAL of PHYSIOLOGY ENDOCRINOLOGY METABOLISM, vol. 287(3) pages E463-E471 whole document	1-3, 5-12, 19-26 and 28

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

- 1 ☒ Claims Nos. :
because they relate to subject matter not required to be searched by this Authority, namely:

Remark: Claims 1-14 are considered to be directed towards methods of medical treatment of a human or animal which the authority is not required to search under Rule 39.1 (iv) of the PCT. However, the search has been established based on the use of the hydroxylated amino acid.
- 2 ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
- 3 ☐ Claims Nos. :
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule

Box III Observation where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

- 1 ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
- 4 ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CA2004/001883

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
EP1206257	22-05-2002	AT281159T T AU7015700 A CA2382835 A1 CN1376062T T DE60015560D D1 EP1421937 A1 FR2797767 A1 JP2003508435T T WO0115689 A1 ZA200201619 A	15-11-2004 26-03-2001 08-03-2001 23-10-2002 09-12-2004 26-05-2004 02-03-2001 04-03-2003 08-03-2001 26-05-2003

US5470879	28-11-1995	AT164064T T CA2105502 A1 DE69317494D D1 DE69317494T T2 DK587476T T3 EP0587476 A1 ES2116421T T3 FR2695317 A1 JP2655044B2 B2	15-04-1998 08-03-1994 23-04-1998 05-11-1998 07-12-1998 16-03-1994 16-07-1998 11-03-1994 17-09-1997
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US5545618	13-08-1996	AT164852T T CA2073856 A1 DE69129226D D1 DE69129226T T2 DK512042T T3 EP0512042 A1 ES2113879T T3 JP3262329B2 B2 JP2001151798 A JP2003192698 A JP2004196825 A WO9111457 A1	15-04-1998 25-07-1991 14-05-1998 30-07-1998 11-05-1998 11-11-1992 16-05-1998 04-03-2002 05-06-2001 09-07-2003 15-07-2004 08-08-1991
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